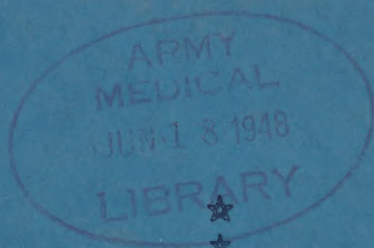


LOS ANGELES CITY SCHOOLS

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L879S
1942

SCHOOLS AND CLASSES
— *for* —
EXCEPTIONAL CHILDREN

THE CHILD WITH IMPAIRED HEARING



LOS ANGELES CITY SCHOOL DISTRICT

School Publication No. 380

1942

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The Child With Impaired Hearing

OFFICE OF THE SUPERINTENDENT

LOS ANGELES CITY SCHOOL(S) District
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FOREWORD

Since the year 1898 Los Angeles has recognized the need for the special education of her deaf and hard of hearing children. One year ago they were moved into a new building especially designed to meet their physical, educational and cultural needs. This building ranks with the best of our newer school buildings which have been designed to serve a similar number of pupils. The teachers of the deaf and hard of hearing are recruited by a civil service examination which has brought to our handicapped children excellent teachers, thoroughly trained in the best of our nation's schools for the deaf and hard of hearing. Los Angeles transports her deaf and hard of hearing children by bus from their homes to school and returns them each day. We are assured that the more we can help these children the more they will be able to serve our community. This publication is designed to give desired information to parents, educators and others interested in the welfare of the deaf and hard of hearing.

VIERLING KERSEY,
Superintendent of Schools



INTRODUCTION

Susan Miller Dorsey, Assistant Superintendent and Superintendent of the Los Angeles Schools from 1913 to 1929, a nationally honored educator, stated in one of her public addresses, "I believe we entirely underrate the achievements of our American civilization. People have grown to be more understanding of their obligations, more wholesome and genuinely humane. This is proved by their relief work and by their provisions for the care and education of the handicapped child. America has shown a steady growth of a social conscience. It may be doubted whether in all time there has been a more spontaneous outburst of a passion for humanity than in America in these recent years. That we have travelled a long way toward social justice can be seen when we compare the fate of the eighteenth century children with the almost tender consideration, shown today in many American schools and communities, for the handicapped child. The spirits of men have grown to a nobler understanding of their responsibility to all children and especially to the handicapped. A more humane and enlightened public opinion has brought about necessary legislation. Great teachers have studied and experimented to discover the most effective techniques. The heart of America is, after all, right. It still has dreams of a better world for all. She has travelled with astounding speed in the relief of destitution and in service to the handicapped child. Our America has just started on a long, triumphant course toward a fuller life for all."

This publication endeavors to set forth what our nation and our own community are doing for children handicapped by impaired hearing. We hope to acquaint our community with

what is being done and to awaken them to study, to experiment, to enact laws which will still further ameliorate the condition of the handicapped, will better protect all children and will finally bring about the abolishment of the causes for physical handicaps.

JESSIE A. TRITT
Head Supervisor
Education of Exceptional Children

IRENE T. SHORT
Principal
Mary E. Bennett School
Los Angeles

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THE CHILD WITH DEFECTIVE HEARING

Definitions

The term "acoustically handicapped" includes both the deaf and the hard of hearing. The term "deaf" designates those in whom the sense of hearing is non-functional for the ordinary purposes of life. The "hard of hearing" are those in whom the sense of hearing, although defective, is functional with or without a hearing aid.

The "deaf" were born deaf or became deaf in childhood before speech was established. The "hard of hearing" became impaired after learning to talk.

There are many who class inability to hear speech as deplorable as blindness. Helen Keller is one of these.

Statistics—Number of Children with Impaired Hearing

New York City found in a recent survey, 30,592 school children with hearing impairment. In elementary schools there were 5,657 pupils, in junior high schools 6,649 pupils, in day high schools 10,843 pupils, in vocational high schools 7,443 pupils. Tested on the 4A audiometer, they were found to have a hearing loss of nine decibels or more in one or both ears. Out of this group of 30,592 children, 1,080 were re-examined on the 2A audiometer and by otologists. The results were as follows:

	Elem.	Jr. H. S.	High	Voc.	Total
Cases examined	312	352	219	197	1080
Percent having 9-14 decibel loss in better ear	(197) 63.1%	(240) 67.9%	(110) 49.9%	(115) 58.3%	(662) 61.3%
Percent having 15-20 decibel loss in better ear	(37) 11.9%	(35) 10.0%	(31) 14.2%	(20) 10.2%	(123) 11.4%
Percent having 21-59 decibel loss in better ear	(74) 23.7%	(77) 22.1%	(74) 34.0%	(62) 31.5%	(287) 26.6%
Percent having 60 or more decibel loss	(4) 1.3%	(0) 0.0%	(4) 1.9%	(0) 0.0%	(8) 0.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

The incidence of the four principal types of ear disease in school children who received the 4A, and the 2A audiometer tests, and at least two otological examinations was as follows:

	6-7 Years	8-9 Years	10-11 Years	12 & Over Years	Total
Non-suppurative otitis media, chronic or recurrent	24	300	555	428	1307
Suppurative otitis media, healed, recurrent, residual, adhesive	36	369	597	449	1451
Suppurative otitis media, chronic	11	61	139	125	336
Nerve deafness	2	33	82	79	196
Total	73	763	1373	1081	3290

New York City reports that all surveys including those made in England show that at least three percent (3%) of the school population have need of special help to overcome their hearing loss. Probably one-third of these children require education in special schools and classes for the deaf and hard of hearing. They estimate that, of these 30,592 acoustically handicapped children, 63% have a loss of 9-20 decibels, 25% have a loss of 20-40 decibels, 11% have a loss of 40-60 decibels, 1% has a loss of 60 or more decibels—100% have a loss of 9 or more decibels.

Josephine Timberlake, Executive Secretary of the American Association to Promote the Teaching of Speech to the Deaf, Editor of *Volta Review*, and Superintendent of Volta Bureau of Washington, D.C., states that of 1,871,111 pupils tested in hearing in the United States, 130,755 or nearly seven percent had impaired hearing. Medical examinations were given to 58,508 of them. The hearing of 7,281 was restored or improved. 17,808 of them were recommended to receive teaching in lip-reading.

Chicago and the State of Illinois reported that approximately ten percent of the school children had some form of hearing impairment. Dr. Crow and Dr. Stacy R. Guild studied 1,365 Baltimore school children between the ages of eight and fourteen years. They found a marked preponderance of hearing loss for the higher frequencies of 4,096 to 16,384 cycles. More than forty percent of the children examined had high frequency losses. Seventy-five percent had pathological conditions in the naso-pharynx.



No one is immune to hearing impairment. Infants and young children are unable to guard their health as capably as adults can. They often poke foreign bodies into their ears. Bock reports that often when the ears of children are examined they are found to be filled with dirt, hardened wax or foreign bodies, such as beads, beans, wheat, rice, seeds, stones, etc. It is the doctor's job to remove such hardened wax or foreign bodies.

Children with colds should be put to bed for a few days. They need regular and adequate hours of sleep, play, work, proper food and clothing and avoidance of crowds. They should be guarded against exposure to cold or draught especially when overheated. Diving, boxing the ears, and even nose blowing may injure the ears. Wear a rubber cap in swimming. Blow the nose gently. Do not wet the hair when combing it.

The percentage of cases of hearing impairment is much greater in unwholesome surroundings than in good homes.

Degrees of Hearing Impairment

The hearing loss may be temporary, or permanent, or progressive. Some children hear well in good weather but are hard of hearing when they have caught cold.

The child with a slight hearing loss (0-20 decibels) can not hear whispers, the one with a moderate loss (20-40 decibels) needs lip-reading, the one with a more marked loss (40-60 decibels) or a severe loss (60-80 decibels) needs lip-reading and the use of a hearing aid, the one with a very severe loss (80-90 decibels) or who can not hear at all (90-100 decibels) needs very special help.

"A significant hearing deficiency" means an impairment capable of interfering with the acquisition of normal articulate speech, a fair education and a personality which will ensure to the individual his economic and social security. Slight hearing

deficiencies often cause retardation, speech defects and emotional maladjustments which, if not discovered and corrected promptly, ruin many a child's career.

Sound

Sound frequency is measured in cycles per second of vibration. Middle C on the piano vibrates 256 cycles per second; one octave lower on the piano vibrates 128 cycles per second; the deepest organ tone vibrates 20 cycles per second; the highest bird note vibrates 20,000 cycles per second.

Sound energy or intensity is measured in decibels. The rustling of leaves is about 10 decibels in intensity; usual radio music is about 40 decibels in intensity; loud radio music is about 80 decibels in intensity; a riveter or airplane is about 90 to 110 decibels in intensity.

Most of the energy of speech is in the vowels. Vowels have low frequency but large intensity. A person may be able to hear the vowels when he can not hear the consonants. Consonants have high frequency (cycles) but small intensity. Such a person needs to watch the speaker in order to understand the consonants by seeing them formed on the lips. A person with a 40 decibel loss barely hears consonants when the speaker is about three feet distant. He can not hear them if the distance is greater. If a child can not hear a whisper from half as far as a normal child he has some 6 to 8 decibel loss. If he has to stand two-thirds nearer than the normal child, he has about a 10-12 decibel loss.

Some Facts on the History of the Education of the Deaf and Hard of Hearing

Knowledge was formerly obtained by "word of mouth". Therefore the education of the deaf was considered impossible. Religion paved the way for public and governmental effort.



Priests, monks, ministers and other religious persons felt spiritual responsibility to help the deaf and other handicapped persons. These persons had made some steps in the education of the deaf in Europe when a minister, Thomas Hopkins Gallaudet (1787-1851) began his work for them in America. The first appropriation of public money made in America in behalf of any institution was the \$5,000 granted by the legislature of Connecticut in 1817 to open the American School for the Deaf founded by Gallaudet. The New York School for the Deaf began in 1818. Horace Mann, about 1840, proclaimed the news that deaf children in Europe were being taught to speak and to understand the speech of others.

Oralism was helped forward by the establishment of day schools. The Horace Mann School, Boston, was the first, starting November 10, 1869, under Sarah Fuller, principal for 41 years, who gave Helen Keller her first lessons in speech. The number of day schools increased slowly up to 1894 when there were 15.

Alexander Graham Bell gave lavishly of his time, interest and fortune to teach speech to deaf children. He founded and endowed the American Association to Promote the Teaching of Speech to the Deaf and The Volta Bureau for the Increase and Diffusion of Knowledge Relating to the Deaf. These were both founded in 1890. Helen Keller turned the first sod in the erection of the present building of the Volta Bureau.

Finding and Helping Children with a Hearing Impairment

Dr. Horace Newhart says the ear in proportion to its importance is the most neglected organ of the body. There should be universal routine hearing tests of all children and prompt medical follow up work to save many thousands of children from deafness. The sooner the loss is discovered the greater

the chances for restoration. Studies reveal that three or four children in each one-hundred have a significant hearing loss.

If all children were examined otologically on entering nursery school, or not later than three years of age, many ear conditions would be detected in time for preventive treatment. Careful clinical and autopsy findings show that no child escapes some inflammation in the middle ear and adnexa. Many children have a slight hearing loss but lip-read so well that only precision instruments will detect the loss.

Observable Behaviors Which May Indicate Hearing Impairment

A hard of hearing child may show one or more of the following characteristics:

- a. Inattention and lack of interest in conversation around him, or abnormally concentrated attention on the individual speaking.
- b. Failure to answer questions or failure to answer correctly.
- c. Repeatedly asking, "What did you say?"
- d. Tilting of the head to one side to bring best ear nearer speaker.
- e. Mistakes in work which depends on oral directions such as spelling and arithmetic, while work depending on written directions may be well done.
- f. Flat, nasal, or monotonous voice.
- g. Bewildered expression when directions are given to class.
- h. Restlessness and evidence of nerve fatigue; chronic fatigue from the constant effort to hear.
- i. Incorrect pronunciation of familiar words.

- j. Tendency to withdraw from the group in play and become a spectator or read instead of entering into the game.
- k. May become a behavior problem in compensation for feeling of inferiority.
- l. If the teacher is in doubt the whispered voice test at 20 feet in a quiet room may be tried, testing one ear at a time. This test will help discover marked hearing loss.

The Rights of the Child

Every child has a right to help in developing those aptitudes with which he is endowed. He has a right to develop those skills, knowledges, attitudes, habits and powers essential to individual success in peace time, to living and working graciously, democratically with others, and to the effective operation of a government of, by and for the people. All youth, including the handicapped, should develop a sense of responsibility for others and for the general welfare. Existing inequalities in educational opportunity should be materially reduced by means of substantial state and federal aid. Free medical and dental service should be provided for all children and youth up to the time of full time employment. At least one child in each 150 needs special help in order to overcome his hearing loss and to become socially efficient.

The Responsibility of Those Concerned with the Handicapped Child

The nation must face the fact of the handicapped child. It costs less to educate than not to educate him. The community must face the fact also. It will pay the price if it does not educate him. It will have to support him if he does not learn to support himself. States must face the facts and provide for state assistance in the education of the handicapped. Parents



also must face the facts. Children themselves must face the facts. They must recognize their problem and intelligently make the most of the abilities they do possess.

"Hearing conservation can be most effectively administered by the joint participation of all agencies interested in the physical welfare and the general and special education of school children. The public health, school and health education departments, together with special education advisors, the state department of education, and the physicians may combine their special abilities in the successful consummation of hearing health and the readjustment of hearing-handicapped children." (Oregon Program for Conservation of Hearing.)

Our democratic society progresses through the efforts of its members. Our society is a living organism. Its health, progress, life, liberty, and happiness depend upon the health, progress, life, liberty, and happiness of its members. As we pour our energy and good will into its life stream, our Democracy will progress. Walter Lippman says, "As we keep men and women from despair, from the hideous boredom of having nothing to do, from the crushing sense of not being wanted, of having no place in society and no work to do, of being a problem and not a human being, we are accomplishing our real task. We must provide work, entertainment, interests, sociability, advice and friendliness and all those imponderable necessities which help to make men self-respecting and confident."

The School Placement of the Child with a Hearing Impairment

1. The child with a slight hearing impairment, less than 20 decibel loss, should be seated favorably in the regular class. Children who have been especially designated for special seating or attention achieve more easily if the teacher observes some simple precautions. The following suggestions have been tried and found helpful.

Allow the child to shift his seat in order best to follow the change in routine. During seat recitations, let the hard of hearing child turn around and face the class so he can see the lips of the reciter. He may sit to the left or right so he can turn his head. Whenever reports are given, or during home room and class meetings, have the children stand in front of the class so the hard of hearing child can see the lips of speakers. The hard of hearing child must see your lips. Therefore, don't talk while writing on the blackboard. Don't stand with your back to the window while talking. Shadow and glare make it difficult to see your lips. Keep your hand and books down from your face while speaking. Stand still while speaking and in a place where light falls on your face. When dictating spelling words or problems, choose one place to stand. If you must move, always come back to the same place before pronouncing the word. Conduct class recitations and discussions from the front of the room. Be sure you have his attention before you give assignments or announcements—gained by tapping. Don't expect him to hear the assignments given without warning from a remote corner of the room, while he is busy doing something else. Particular care must be used in dictating spelling. Use the words in sentences to show which of two similar words is meant. For example, "Meet me after school" and "Give the dog some meat." Thirteen words look like meat when spoken, such as bean, bead and beet. Context of the sentence gives the child the clue to the right word. Have the hard of hearing child say the words to himself before a mirror as he studies his spelling lesson. Ask the child if he understands after an extensive explanation of an arithmetic (or algebra) problem. Speak naturally. Don't exaggerate or over emphasize. Gestures are distracting. If the hard of hearing child misunderstands, restate the question or statement in a different way, as the chances are you are using words with invisible movements. Be patient and never skip him. Be sure things do not get past him. The hard of hearing child may need formal lip-reading but

these suggestions will help him over difficult spots. Give him a chance to read ahead on a subject to be discussed in a project, such as on "whales". He will be more familiar with the vocabulary and can follow along better. As he acquires skill in lip-reading, insist that he catch the assignment promptly. This will cause him to keep alert. If the child is deficient in a grade subject, a bright child may be assigned to help him or to see that he gets the correct assignments.

2. The child with a somewhat greater impairment needs not only the favorable seat but also lip-reading instruction from a travelling teacher of lip-reading who will help him one or two periods each week. Children who can hear well enough to learn to speak naturally can often complete their work at public schools if they are given the help of lip-reading teachers. Any child whose hearing is not sufficient for him to learn to speak fluently and naturally should be sent to a special school. It is a grave injustice to keep a deaf or hard of hearing child away from a special school where he can be taught to speak and to read the lips, allowing him to struggle along, half-understanding, until his language has become confused and imperfect and he has become discouraged and unhappy.

Watch the child's school progress carefully. His work may not be satisfactory because the teacher does not appreciate the necessity of explaining things carefully and patiently. Or, he may not be hearing all the discussion in the classes. Lip-reading will help him to get more information. Know what his work is and whether he is doing it.

Hard of hearing children have special difficulty with lessons which are orally taught. Spelling and arithmetic head this list. Spelling is trying because many hard of hearing children cannot hear "s" when it is pronounced, and cannot distinguish between short "i" and long "e", frequently misspelling such a word as "peek" by writing "pink". Then, too, there are many groups of words which appear alike on the lips; if he has not heard the



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1 2 3
4 5 6 7 8 9 10
11 12 13 14 15 16 17
18 19 20 21 22 23 24
25 26 27 28 29 30

word, he may write any one in the group instead of the one given. Explain carefully, to the child alone if necessary; be sure he understands; do not allow him to bluff by saying, "Yes, I heard you."

3. The child with a still greater impairment needs the favorable seat, lip-reading instruction and a hearing aid. He also needs special coaching in order to keep up with the regular class.

Many in this group and all those with more serious hearing impairment can be more adequately helped by attending the Special Day School for the Deaf and Hard of Hearing. The Los Angeles City Day School is named "The Mary E. Bennett School" after the first teacher of the deaf in Los Angeles City Schools. Los Angeles began this work in 1898.

4. The State Residential School for the Deaf is located at Berkeley, California. Some young children especially need the twenty-four hour home and the opportunities provided at the State Residential School. Some of the older students especially need the vocational guidance and training available there.

Those interested in the child's welfare, including the educators concerned, will endeavor to see that he is placed in the school situation which is best for his particular needs.

The Mary E. Bennett School for the Deaf and Hard of Hearing

The child with defective hearing who is denied ready communication with people through speech, through reading, through writing, is limited in his own mental life. As soon as this isolation barrier is broken down, as soon as he can communicate freely, his own mental development can move on toward full capacity. Early training is very important. The school laws of California permit the enrollment in the public schools for the deaf and the hard of hearing at the age of three years.

These young children play with large blocks, have toys and picture books. They learn to pick up the "fish" or the "ball" or the "doll" and say these words. They "run", they "jump". They learn "red", "yellow", "blue", and other colors. So they build up a vocabulary of words and their meanings.

The child who has learned to talk before he became deaf has a tremendous advantage over the child born deaf. Deaf children can learn to talk although this is a very difficult task. As the deaf child learns words and understands the meaning of words, whether they are spoken or symbolized, life broadens and opens for him for words are ideas, and ideas are the vehicle of thought. New words bring forth new ideas. Some one says, "Ideas are the stuff out of which heaven and earth are made."

The deaf child cannot think except in terms of images or sensations. He must be taught, with infinite patience and at first almost word by word, the language even for the commonest things.

Word-hearing is physiological. Word-imagery is psychological. Word-hearing must be associated with the object or thing to which such word applies to develop word-imagery. The normal-hearing person addressed in a foreign language has word-hearing but not word-imagery. He does not comprehend the words. In acoustic practice we strive for normal association of word and idea—of word-hearing with word-imagery. The deaf child does not know his name or age. He does not know words nor their meaning. He cannot imitate the voices of others. One is inclined to the opinion that special teachers of the deaf have a task unsurpassed in difficulty by any of the other types of teaching.

Use of Hearing Aids and Training Residual Hearing

All residual hearing should be trained by means of hearing aids and by other methods.

Max A. Goldstein, the Director of the Central Institute for the Deaf in St. Louis states:

Itard in 1805 experimented with six deaf pupils in Paris. He began acoustic practice with bells, gradually reducing the tone intensity. He then substituted musical tones, the rhythmic beat of the drum, the sustained notes of the flute, and finally the five elementary sustained vowels and the production of consonants. Word hearing was developed satisfactorily in two children. Itard died and Blanchet in 1832 went on with the exercises. Deleau in 1838 declared himself in favor of such acoustic exercises in the education of deaf mutes. Itard said, "All tone accessories must be consistently and persistently applied." Itard believed that one-half of the so-called deaf heard some sounds. Toynbee in 1860 in London tried this treatment and cites marked improvement after constant practice with vocal sounds.

After awhile this plan waned. America then revived it. In 1884 Gallaudet stimulated audition in the so-called "semi-deaf". Others followed. Goldstein at the St. Joseph School for the Deaf in St. Louis tried it with a class of sixteen girls from six to eighteen years old. They had daily practice of fifteen minutes. He felt that the principles and practice of acoustic training were thoroughly sound. In 1920 Goldstein presented his form of pedagogy in the acoustic method.

THE ACOUSTIC METHOD—PRINCIPLES

Every pupil shall receive at least ten minutes daily systematic training by acoustic stimuli, irrespective of the degree of deafness, the age of the pupil, or the scholastic status. Every change in the hearing perception of each child is recorded on a chart with the date of each observation to keep a chronological record of the pupil's progress. All should have at least ten minutes daily instrumental stimulation in addition to the acoustic exercises for developing appreciation and differentiation of sound frequencies. The entire range of the tonal scale should be constantly subjected to stimulation, concentrating on



the development of tone perception within the range of the speaking or singing voice. One of the essentials for success in the application of the acoustic method is its constant, daily and systematic practice.

The definitely noted improvement in hearing by acoustic training is very likely the result of mental appreciation in the hearing centers or areas of the brain. It is difficult to say where hearing perception ends and tactile impression begins. Some pupils classed as totally deaf have made more rapid progress than some pupils classed as partially deaf. Musical instruments such as the organ, piano, accordion, harmonica, human voice and a continuous tone-range audiometer, can also be used. The latter has the advantage of accurate measurement and recording of tone intensity and notes of progress in volume perception by the pupil. The radio can be used also.

In Review of Educational Research, Volume XI, Number 3, Christine P. Ingram reports that the degree of success in speech and lip-reading was studied at the Illinois School for the Deaf following their full time use of the earphone in their classes. They improved in (a) drill vocabulary, (b) speech intelligibility, (c) acoustic understanding, (d) acoustic speech reading, and (e) speech reading. Their success was directly related to the extent to which hearing was trained.

Mary E. Numbers says: "After an acoustically handicapped child has been trained to listen he may be able to discriminate between sounds of varying pitches and less and less powerful intensity. He needs a series of sense training exercises for the sense of sound. He is taught to listen, to give a quick accurate response to sound, to discriminate between sounds of different pitches. Later similar exercises using voice and connected speech must be provided. He is taught to watch the teacher's lips while he listens to her voice. He should, if possible, hear his own speech as well as his teacher's speech patterns. The training of residual hearing must be started as early in the child's life as possible. Single words are more difficult to hear

than sentences. The child should use both sight and hearing to piece together the speech patterns until they make sense."

Another teacher states: "The children have derived much pleasure from the use of the radio. They started by listening and keeping time to simple rhythms; sometimes by tapping the feet, sometimes by clapping the hands, sometimes by inventing dance steps of their own. Sometimes they put their heads down on their arms and shut their eyes and rest. Sometimes we have a contest to see how much they can get from what is being said on the radio. The radio has helped to give them an appreciation of music. Sometimes we recite songs in unison while the piano plays. Then we add appropriate bodily movements and dramatize the songs."

The Mary E. Bennett School has a number of excellent group hearing aids. For many years they have used the piano, the radio-ear, the radio, rhythm bands, chorus singing and other helps for training the residual hearing of the children. They have several chorus groups. The teachers make lantern slides with the words of the songs. The hard of hearing children sing lustily. The deaf children repeat the words to the proper rhythm. They enjoy patriotic songs, Christmas songs, hymns, the old folk songs and the best of the popular songs of the day.

Marshall Hester, Supervisor, California State School for the Deaf, Berkeley, California states: "The selection of hearing aids is very important. Instruments too strong will damage hearing. The small, portable, battery aids are not so powerful, therefore less dangerous. However, nervousness and head noises may result even from these aids. Usually children under twelve cannot successfully use a portable hearing aid. Many older children will not tolerate the inconvenience and embarrassment of a hearing aid. Group hearing aids in school are more practicable and less expensive. An ideal group hearing aid should have a microphone for each child and one for the teacher. Each child should be provided with two earphones set to the hearing loss peculiar to each ear so there can be selective amplification. As yet this type of hearing aid is too

expensive for practical use. Experimenters are working on the problem. A group hearing aid accelerates the rate of achievement of hard of hearing children and also improves their speech. It gives them a psychological lift. There is more interest and alertness evident in the group. High tones are associated with the consonants. Low tones are associated with the vowels. The hearing aid helps with the low tones and vowels, and the use of lip-reading helps with the high tones and consonants. This combination of hearing aid and lip-reading is most effective. The hearing aid should be taken off at intervals. The child who becomes nervous or gets a headache or earache should use it much less. Let the child decide when or when not to wear it. Let him take it off when he is tired. Very few children are totally deaf. Many of them can profit from the use of the hearing aid. They should have daily practice for not less than twenty minutes. Some deaf children profit from a forty-five minute period of speech development and corrective exercises with a hearing aid. A hearing aid can help many deaf children but it cannot make a child hear language. He can hear sounds, and some words, but not long sentences. Certain deaf children can get the vowels on the hearing aid and can read the consonants by lip-reading. This accelerates their achievement rate.

"The old fashioned hearing tube is superior to some of the electrical aids now on the market. It works when used with one person at a time. A fine hearing aid is to cup the hands about the mouth and speak in a loud conversational voice at a distance of about six inches from the ear."

Speech and Voice Training

It is important that the young deaf child learn speech at the same age as his normal hearing brother. If he begins his training early he will acquire greater flexibility, variation in pitch, softness and better control. He may develop greater scholarship. The hard of hearing child often has difficulty in



pronouncing all speech sounds correctly. His particular difficulties are usually with the high frequency sounds. Some of these particular sounds are "s", "th", "t", "sh", "ch", "z", "v". Vowels are easier to hear than consonants.

The average child achieves liberation through speech. Speech, emotional and intellectual growth occur side by side, inextricably interwoven. Children must be encouraged to speak at every opportunity. They "learn by doing." When one learns to play golf, he practices golf. When a child learns to speak, he must practice speaking at home, at school, and away from these places. Those near him should know his vocabulary and insist that he use it correctly. Otherwise his speech may deteriorate and not be comprehensible.

All the teachers must share the responsibility of building a speech program. Some one or a committee should direct this program. They should give tests and know each child's ability in speech. They should listen to the children. Phonograph recordings of the voices of deaf children are often revealing and helpful. One should be taken at the beginning and another at the end of the year to show progress in speech. Neglected speech is poor speech. Cultivated speech is good speech.

Touch and Visual Aids

Dr. Elwood Stevenson, Superintendent, California School for the Deaf, Berkeley, California, says that many of the deaf need glasses also. They need to work in a well lighted room so that they can see well to compensate for their lack of hearing.

Lip-Reading—Use of Eyes

Lip-reading or speech reading is the ability to understand spoken words and language by watching the face of the speaker. Lip-reading is a most vital asset to the rehabilitation of the hard of hearing child. Every human with defective hearing should

make it his special objective to become a fluent and accurate lip-reader and to make this asset his most dependable one. He must be taught to be an efficient lip-reader and also be taught to conserve the characteristics of the voice. He must overcome monotony of voice and develop good inflection, rhythm, phraseology and intensity. Lip-reading helps remove the terrible nerve strain of trying to hear. The child should use every bit of hearing he has. A combination of imperfect hearing and intelligent lip-reading is almost equal to good hearing.

The Gault Phonotactor—Use of Feeling

Robert H. Gault of Northwestern University experimented and made the Gault Phonotactor. In the deaf school each pupil has on his desk a vibrator which is connected with the teacher's microphone. As the teacher speaks each child feels her words and also sees her lips. In this way vision and touch cooperate to help the deaf child understand more perfectly what the teacher is saying. Many sounds look alike on the lips and cannot be recognized by the lip-reader regardless of his ability. The deaf child places his hands on the vibrator, a part of the Gault Phonotactor, and the teacher speaks into the other part, a microphone. Through speaking into the microphone himself and feeling the vibrator the deaf child discovers his own voice—he feels the tingling. The teacher shows "ball", says "ball". He feels vibrations. Then he tries to say it. Then he learns "book". The Gault Phonotactor is not a hearing aid. It is an approach to those who have no hearing. It can help to develop more normal speech among the deaf. The Gault Teletactor is an electrical device that amplifies vibrations of voice for tactual interpretation. Every effort to put the qualities of speech into visual form should help those to speak who cannot hear.

Well Known Visual Aids

The name or word is applied to the object it symbolizes. So a teacher uses the ball, the book, the fish or some other object

to teach the word to the child. To teach about birds, animals, trees, lakes, trains and other things of interest, our teachers of the deaf and hard of hearing take them out to see these things. When it is not possible to see the object, pictures are shown. Motion pictures and other visual aids are available in the Visual Education Section. Beautiful books, well illustrated, are generously supplied by the Library and Textbook Section.

Personality Development and Social Adjustment

The child with hearing loss suffers emotional strain. He is scolded, insulted, misunderstood, ridiculed. He hears only part or none of what is said. He is faulty in pronunciation and articulation. He uses partial phrases. He is retarded, unadjusted, unhappy. Yet we must not over-protect children. This unfits them for a happy life in a real world. Loss of hearing to any degree does present difficulties which the individual has to face. His reaction depends upon many factors among which are the degree of the hearing loss and the time of occurrence of this loss.

The child can be helped to become a social asset and not a liability. He can find ways to build on his interests, aptitudes, strengths and to rise above his handicap. The most important problem with the acoustically handicapped is a psychological one. The aim is to help him build a philosophy which will give him a determination nobly to fill his place in life and to overcome or rise above his handicap in so far as possible.

The New York City Bureau of Child Guidance reported that forty-five children referred to them the preceding year for psychological study or psychiatric treatment were found to have severe hearing losses which had not been detected or were not known to their schools. This was apparently the cause of the maladjustment. Frequently a child adjudged to be backward may become a star pupil if he learns to read the teacher's lips or is seated where he can hear.





The aim of education of the deaf child should be to make him a well integrated, happy, deaf individual and not a pale imitation of a hearing person. Let us produce happy, well adjusted deaf individuals each different from the other, each with his own personality. Our aim must be a happy, deaf person. We form a picture of ourselves as we believe others picture us. We tend to become what others think we are. One's reactions to his environment gradually form his personality. As his reactions differ from the reactions of others, he becomes a distinct personality. We must develop in the handicapped child the attitude of self-confidence and self-reliance that will bring the satisfaction of actual achievement.

The hard of hearing or deaf child must develop tools of learning different from those which most of us use. He and those around must have faith to believe that he can bring to life a real contribution and receive from it a satisfying contentment and appreciation. The goal is to a development which shall be well balanced and constructive, emphasizing the things the child can do rather than those which he cannot do, and making all these the basis of his contribution to community life. We must minimize the limitations and must capitalize the capacities of each child for his greatest personal happiness and his greatest service to the community. Our first objective is to provide optimum conditions under which acoustically handicapped children may live and learn. We must train them for social competence, for useful and happy living.

It is hard to live with a deaf person but it is harder still to be the deaf person lived with. The slightest change of expression does not escape his observation. The child notices the impatience with his slowness. He feels ostracized from the family activities. He may be teased or ridiculed by the younger ones around. This may cause him to be a social failure. Social isolation gives rise to moroseness and despondency. Through education to understand, speak, read, write, the deaf are raised from a wretched and forlorn condition to that of intelligent and moral beings.

Socialization is extremely difficult for the totally deaf. Speech and hearing are bound together in rise of conscienceness and sense of self. There is need to provide some adequate form of communication. It is a long hard process for the deaf to learn to talk, and to lip-read. Even with the best facilities, the child falls behind the normal fellows. Concepts and ideas depend so much upon verbal communication. They feel left out. They see but do not participate. They feel inferior, and begin to dream and satisfy by fantasy. They may show strong resentment. They suffer from mental and social isolation. Their vocational problems are hard to solve. The partially deaf hear part of what goes on, but they are limited. A barrier arises. They may become inattentive and retreat into day dreaming or reverie. They become mentally and socially retarded. They sometimes are tactless and misinterpret the social situation. They hear the loud sounds and may think the speaker is angry. They lose the soft sounds. They grasp only fragments. They feel isolated and live within themselves. They lack self-confidence and show a sense of inferiority.

Margaret Prescott Montague wrote in 1934, "Pity is the last thing they want. On the very hardness of the facts they can rise triumphant and make the world their own. They can wrest victory from disaster. Humanity is not so chained but through the divine gift of inspiration they may rise gloriously above adversity. Somewhere, somehow a great hidden purpose is served, and the whole tide of human courage is raised a little higher by the courage of one. All creation moves on nearer that great eternal purpose of the universe. Let us play up!"

Vocational Guidance and Placement

Among the occupations of the deaf we find lawyers, ministers, teachers, artisans, artists, farmers, clerks, mechanics, laborers, homemakers and other types. They are usually law-abiding and self-supporting. The whole school and family life of the handicapped child must include consideration of his voca-





tional possibilities as well as of his cultural and social training. During the formative years efforts should be made to cultivate the latent abilities of youth. He needs vocational guidance into an occupation where good hearing is not essential.

The first need of the hard of hearing in economic terms is to have an employable personality. The best case for adjustment is one reached as soon as possible after the hearing loss. For a vocational activity, the real question to be answered is, "What would this person have done most successfully if no hearing impairment existed?" Answer that, provide the requisite training and experience. Then give him a sane vocational placement. Compensation for a reasonable hearing loss through lip-reading and a hearing aid is fairly easy.

Henry Ford, according to the Crippled Children's Bulletin, employed at that time 11,824 handicapped men. That amounted to about one person out of every eight on his payroll. Henry Ford says in his book, "Society can absorb all its disabled and pay them full wages without charity. It can use all its blind and more in positions where eyes are not needed. An efficiency study of my factory showed that we could use nearly fourteen hundred (1400) men with only one leg, an equal number with only one arm, several men without legs, and thousands who were feeble minded, pay them six dollars a day, and have them earn their money. All that is needed is a job analysis to set the legless man at the job where legs are not needed."

Elise H. Martens, Senior Specialist, Education of Exceptional Children, United States Office of Education, in her report "The Deaf and Hard of Hearing in the Occupational World" states, "It is the right of the deaf and hard of hearing to become occupationally adjusted. It is our responsibility to guide them in that direction. To guide them we should know in which types of occupations handicapped adults are now most successfully engaged. We also need to know the relationship of success in a given occupation to other factors such as degree of deafness, command of speech and education. We need to know the personality of the student, his capabilities,

interests, and emotional equipment. We must consider his assets and liabilities and the world of employment in which he must find a place. According to employer's estimates, eighty-five percent of the employees rated were successful in their work, more than fifty percent being rated as 'succeeding very well'. However, more than seventy percent had no prospects for promotion. Only eight percent had excellent prospects. The median weekly earning was approximately eighteen dollars. About ten percent earned forty dollars per week while fifty-seven percent received less than twenty dollars. Persons trained in public high or trade schools seem to have had an advantage in prospects for promotion and in earning power over those trained in schools for the deaf. Tom L. Anderson of the Iowa School for the Deaf recommended that the average deaf train for the humbler tasks of life. Many of them cannot make the grade demanded of skilled workmen today or else can not remain in school long enough to complete the necessarily rigorous training. The use of a hearing aid to augment hearing acuity where this is possible, supplemented by the technique of lip-reading and the preservation of purity of speech is bound to help the hard of hearing person in his vocational success. Among the great tasks facing us in the education of exceptional children is that of finding the occupations in which they can serve happily in spite of their handicap."

Costs of Education of the Deaf and Hard of Hearing

The average daily attendance of elementary pupils in the day school for the deaf and hard of hearing is about 170 pupils. In the junior and senior high school branch classes there is an average daily attendance in classes for the deaf and hard of hearing of another 50 pupils. The enrollment is 181 elementary, 45 junior high school, 20 senior high school, or 246 pupils. There are in the regular schools, receiving lip-reading lessons about twice each week, 250 elementary pupils and 180 high school pupils. The total enrollment in all these classes is 676 pupils. For the school year 1940-1941 the pupil per capita





cost was \$456.79 elementary and \$317.40 high school. The regular elementary pupil per capita cost was \$111.23. The regular high school pupil per capita cost was \$159.03. The State of California reimburses the district up to \$200 on the excess cost of education of physically handicapped children. This includes classes for the blind, for sight-saving, for deaf and hard of hearing, lip-reading, crippled, tuberculous, and for other types of physically handicapped, including speech correction. The average per capita cost of all these was \$309.40 elementary and \$278.42 high school. Therefore the district was able to secure full reimbursement on the excess cost of educating the handicapped. The high costs of educating the deaf and hard of hearing, and the blind are due to the need for very small classes, special equipment and bus transportation. It pays the district to educate its handicapped children to be self-supporting adults or able to make some contribution to society rather than to be dependents all through their lives.

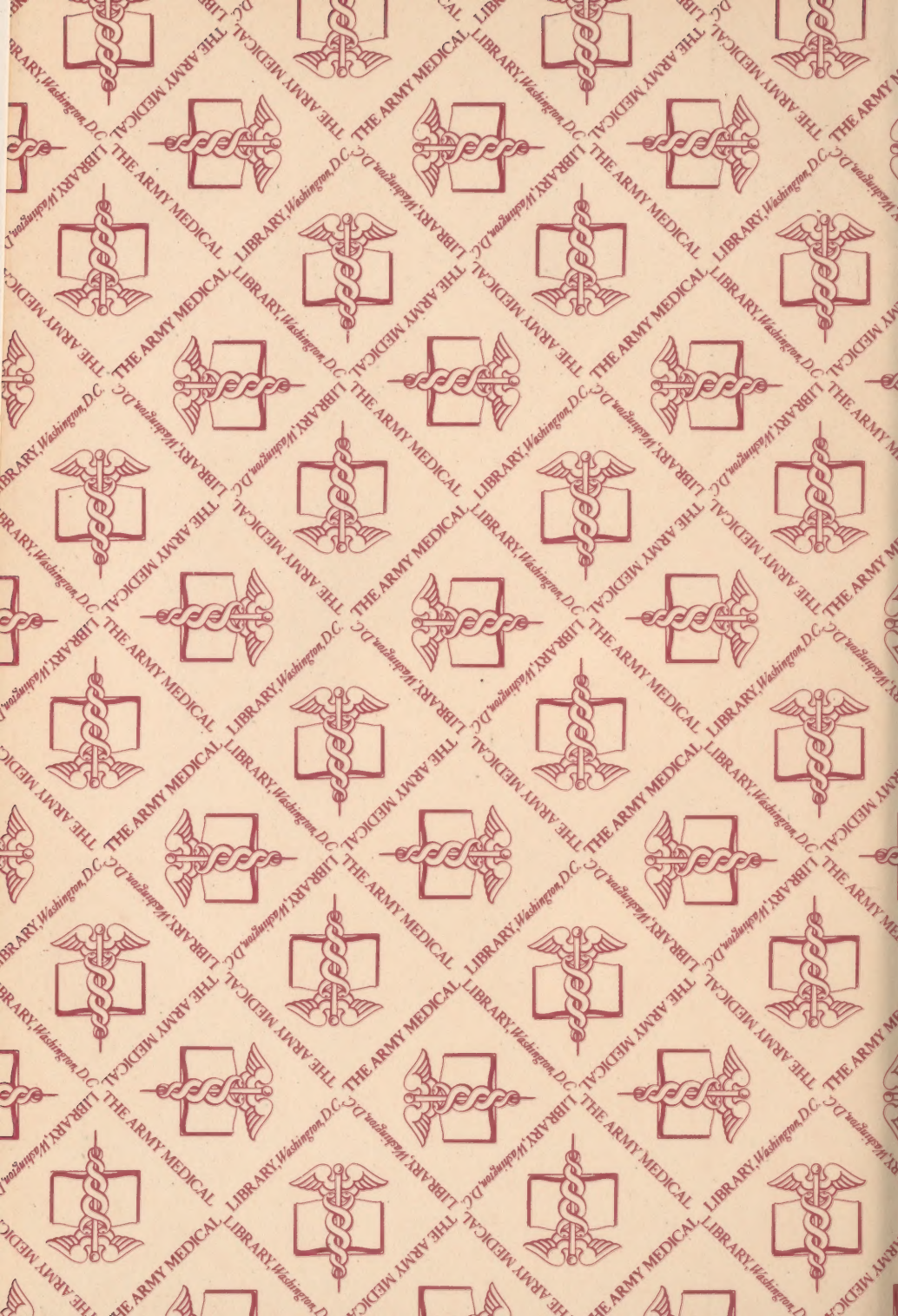
Teachers of Deaf and Hard of Hearing

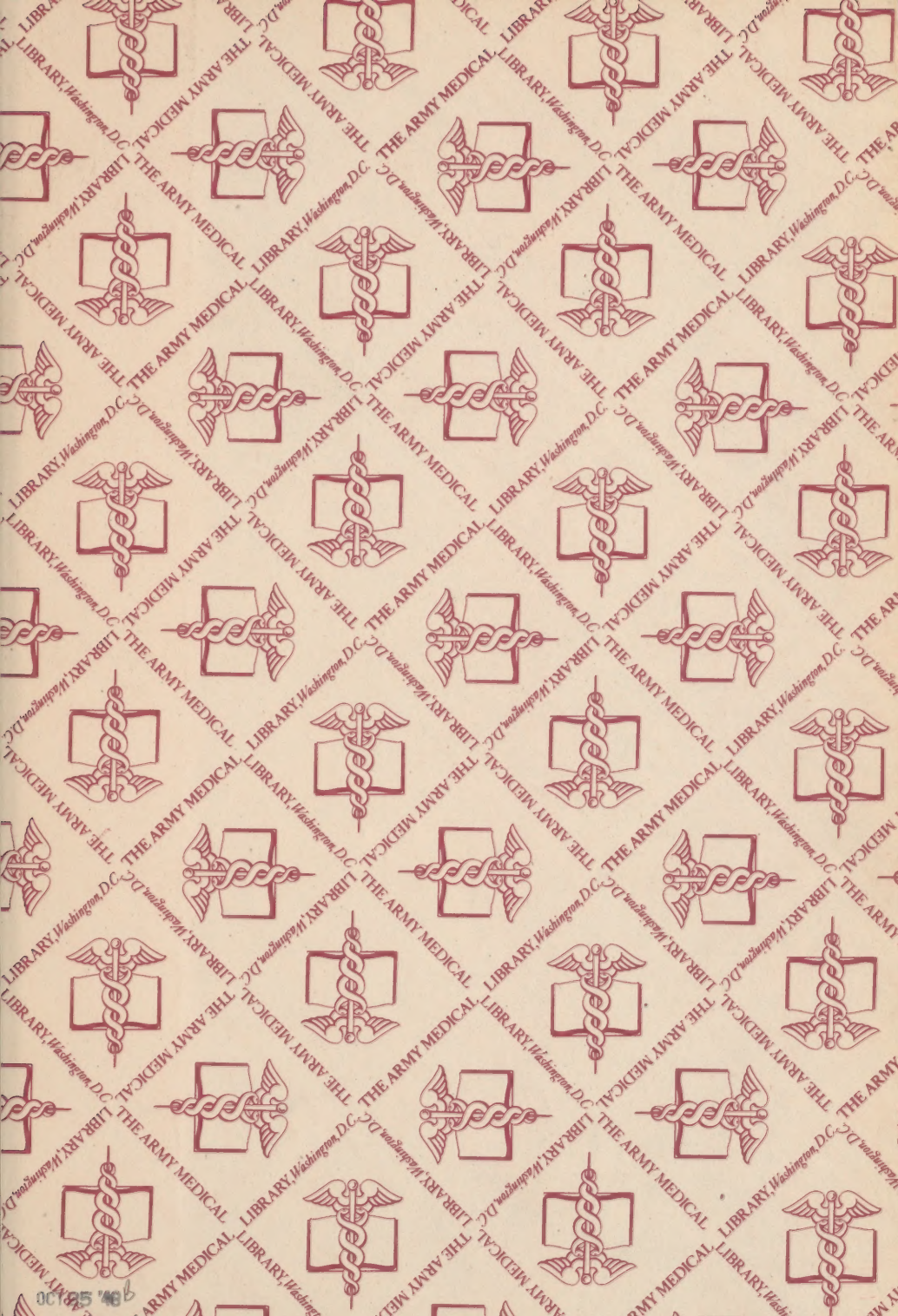
Teachers of deaf and hard of hearing enter the Los Angeles City Schools by examination and placement on an eligible list. A list was established July 2, 1942 which contains the names of four teachers for elementary work and two for high school work. The adult list was established August 28, 1941 and contains three names. Teachers in elementary and high school classes for deaf and hard of hearing children are paid on the same salary schedule as regular teachers. They must hold a general elementary or secondary certificate as well as have special training for the education of the deaf or hard of hearing. Those who enter must be not less than nineteen years of age nor more than forty-five. They must pass a physical examination. Normal hearing is required for teachers of deaf and hard of hearing children, and of all entering teachers of children. Teachers who are hard of hearing may take only the examination to teach lip-reading to adults. Of course some of the personnel in the Los Angeles City School System have some

hearing impairment. This does not debar them from service so long as they can carry on their work efficiently. Our Superintendent, Vierling Kersey, issued a bulletin recently encouraging our personnel who would benefit from the use of a hearing aid to use it with the same assurance as those who need glasses wear their glasses.

Classes For Adults Who Have Defective Hearing

There are day classes for adults who desire instruction in lip-reading and voice improvement. They have the use of group hearing aids, have instruction in singing and other helps for hearing and seeing speech and for learning to use the speech organs properly. About 100 persons are enrolled for lip-reading and another 100 are enrolled for voice in the day school for adults. Four evening high schools have similar classes. The total monthly attendance of adults in these classes is more than 700.





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